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ECUADOR

WATER AND SEWER PROGRAM FOR PORTOVIEJO CANTON

(EC-L1248)

LOAN PROPOSAL

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CONTENTS

PROGRAM SUMMARY

I.	DESCRIPTION AND RESULTS MONITORING.....	1
	A. Background, problem to be addressed, and rationale	1
	B. Objectives, components, and cost	10
	C. Key results indicators	11
II.	FINANCING STRUCTURE AND MAIN RISKS.....	11
	A. Financing instrument	11
	B. Environmental and social safeguard risks.....	12
	C. Other risks and key themes	13
III.	IMPLEMENTATION AND MANAGEMENT PLAN	15
	A. Summary of implementation arrangements	15
	B. Summary of arrangements for monitoring results	17

APPENDIXES

Proposed resolution

ANNEXES	
Annex I	Summary Development Effectiveness Matrix
Annex II	Results Matrix
Annex III	Fiduciary Agreements and Requirements

REQUIRED LINKS	
1.	Multiyear execution plan and annual work plan
2.	Monitoring and evaluation plan
3.	Environmental and social management report
4.	Procurement plan

OPTIONAL LINKS	
1.	Technical analysis
2.	Economic analysis
3.	Financial sustainability analysis
4.	Draft program Operating Regulations
5.	Compliance with the Public Utilities Policy
6.	Program monitoring report
7.	Environmental and social evaluation
8.	Financial analysis of the municipio
9.	Gender diagnostic assessment and actions
10.	Meaningful Stakeholder Consultation Report
11.	Environmental impact study
12.	Matrix of problems and solutions

ABBREVIATIONS

AECID	Agencia Española de Cooperación Internacional para el Desarrollo [Spanish Agency for International Development Cooperation]
BOD	Biochemical oxygen demand [test]
CGE	Contraloría General del Estado [Office of the Comptroller General]
CNEL	Corporación Nacional de Electricidad [National Electricity Corporation]
COOTAD	Código Orgánico de Organización Territorial, Autonomía y Descentralización [Territorial Organization, Autonomy, and Decentralization Code]
COPFP	Código Orgánico de Planificación y Finanzas Públicas [Planning and Public Finances Code]
EIB	European Investment Bank
ESA	Environmental and social analysis
ESMP	Environmental and social management plan
ESMR	Environmental and social management report
FONPRODE	Fondo para la Promoción del Desarrollo [Development Promotion Fund] of the Spanish Ministry of Foreign Affairs and Cooperation
GAD	Decentralized autonomous government
GADMCP	Gobierno Autónomo Descentralizado Municipal del Cantón Portoviejo [Decentralized Autonomous Municipal Government of Portoviejo Canton]
ICB	International competitive bidding
LIBOR	London Interbank Offered Rate
MEP	Multiyear execution plan
NRW	Nonrevenue water
PMU	Program management unit
Portoaguas	Empresa Pública Municipal de Agua Potable y Alcantarillado de Portoviejo [Portoviejo Municipal Water and Sanitation Company]
SENAGUA	Secretaría de Agua [Secretariat of Water]
SNCP	Sistema Nacional de Contratación Pública del Ecuador [National Public Procurement System of Ecuador]
WTP	Water treatment plant
WWTP	Wastewater treatment plant

PROGRAM SUMMARY
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Financial Terms and Conditions					
Borrower:			Flexible Financing Facility^(a)		
Decentralized Autonomous Municipal Government of Portoviejo Canton (GADMCP)			Amortization period:	25 years	
Guarantor:			Disbursement period:	5 years	
Republic of Ecuador					
Executing agency:			Grace period:	5.5 years ^(b)	
GADMCP					
Source		Amount (US\$)	%	Interest rate:	LIBOR-based
IDB (Ordinary Capital):		27,500,000	23	Credit fee:	^(c)
Development Promotion Fund of the Spanish Ministry of Foreign Affairs and Cooperation (FONPRODE):^(f)		17,000,000	14	Inspection and supervision fee:	^(c)
European Investment Bank (EIB)^(g)		59,885,048	49	Weighted average life:	15.25 years
Local:		17,673,107	14		
Total:		122,058,155	100	Approval currency:	U.S. dollar
Program at a Glance					
<p>Program objective: The program's general objective is to support the GADMCP in its efforts to improve water and sanitation services in Portoviejo Canton, which will help achieve the objectives of the national government's "Water and Sanitation for All" program and improve environmental conditions in the canton as well as living conditions for its residents. Its specific objectives are to: (i) expand and improve access to water and sanitation services, taking into account the impacts of climate change; and (ii) improve the management of water and sanitation services through the implementation of nonrevenue water and energy efficiency programs, as well as operational and social management actions in the service areas slated for expansion.</p>					
<p>Special contractual conditions precedent to the first disbursement of the financing: (i) the borrower will have formed a program management unit that is operating with sufficient administrative, financial, operational, and legal capacity to execute the program; and its staff will have been contracted or appointed in accordance with the terms of reference and profiles included in the program Operating Regulations; (ii) the program Operating Regulations, to include an environmental and social management plan as an annex, will have been approved and entered into force in accordance with the terms and conditions previously agreed upon with the Bank; and (iii) the executing agency will have presented evidence, to the Bank's satisfaction, that resources have been allocated for the first year of program execution, duly approved by the Portoviejo Municipal Council, to include the allocation of external financing resources and own resources in accordance with the program's financial plan (paragraph 3.10). See special contractual conditions in Annex B of the environmental and social management report (ESMR).</p>					
<p>Special contractual conditions for execution: (i) during the program execution period, the executing agency agrees to present to the Bank's satisfaction, in the last quarter of each year, the budget appropriation duly approved by the Portoviejo Municipal Council for the following calendar year of program execution, to include the allocation of external financing resources and own resources in accordance with the program financial plan; (ii) prior to the award of construction contracts for the water treatment plant and water supply lines: (a) the executing agency will have presented designs approved by the National Electricity Corporation (CNEL) for the electrical transmission line to supply the water treatment plant; and (b) an interagency agreement will have been signed by CNEL and the borrower, authorizing the GADMCP to finance and build the electrical transmission line (paragraph 3.11). See special contractual conditions in Annex B of the ESMR.</p>					
Exceptions to Bank Policies: None					
Strategic Alignment					
Challenges:^(d)	SI	✓	PI	✓	EI
Crosscutting themes:^(e)	GD	✓	CC	✓	IC ✓

^(a) Under the terms of the Flexible Financing Facility (document FN-655-1), the Borrower has the option of requesting changes to the amortization schedule, as well as currency and interest rate conversions. The Bank will take operational and risk management considerations into account when reviewing such requests.

^(b) Under the flexible repayment options of the Flexible Financing Facility, changes to the grace period are permitted provided that they do not entail any extension of the original weighted average life of the loan or the last payment date as documented in the loan contract.

^(c) The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges, in accordance with the applicable policies.

^(d) SI (Social Inclusion and Equality); PI (Productivity and Innovation); and EI (Economic Integration).

^(e) GD (Gender Equality and Diversity); CC (Climate Change and Environmental Sustainability); and IC (Institutional Capacity and Rule of Law).

^(f) Development Promotion Fund (FONPRODE), a financing instrument of the Spanish Ministry of Foreign Affairs and Cooperation governed by Law 36-2010 and Royal Decree 597/2015 approving the FONPRODE regulations. The IDB-Kingdom of Spain cofinancing framework agreement was signed on 1 April 2017. As provided by the framework agreement, the IDB will charge a servicing fee on program preparation expenses, to be distributed among Bank departments that supported the program's preparation, execution, and monitoring. The Spanish Agency for International Development Cooperation (AECID) channeled an approval request for €10 million in nonreimbursable resources from the Latin American Investment Facility (approved on 28 October 2019). These resources will be managed by the AECID and used to finance works benefiting other rural areas of the canton.

^(g) The loan proceeds to be provided by the European Investment Bank through parallel financing are subject to availability and that EIB approval.

I. DESCRIPTION AND RESULTS MONITORING

A. Background, problem to be addressed, and rationale

- 1.1 **Ecuador's economy could feel the impact of a fiscal adjustment.** In 2017, after the commodities super cycle had run its course, the Ecuadorian economy logged growth of 2.4%. A fiscal consolidation effort undertaken at the time strengthened public finances and international reserves, but had immediate consequences, including an expected 0.5% decline in growth in 2019. This could exacerbate labor market conditions and poverty indices.
- 1.2 **Canton¹ of Portoviejo.** Manabí province is made up of its provincial capital, Portoviejo, urban parishes, and seven rural parishes, occupying a total of 960.7 square kilometers. According to the National Statistics and Census Institute (INEC), it has an estimated population of 316,444, 26% of which resides in rural areas. The canton is administered independently of the central government by the Decentralized Autonomous Municipal Government of Portoviejo Canton (GADMCP).
- 1.3 **Water and sanitation services in Portoviejo and problems to be addressed.** The GADMCP provides water, sanitation, and stormwater drainage services through the Portoviejo Municipal Water and Sanitation Company (Portoaguas) in urban areas and the rural parishes of Crucita, Alajuela, and Calderón. In the other rural parishes, these systems are administered by municipal water boards. The levels of water and public sewer system coverage in urban areas are 92% and 79%, respectively, while in rural areas the corresponding levels are 34% and 15% (Portoaguas, 2018). This substantial service delivery gap between urban and rural areas is also reflected in wastewater treatment services. In the target area, water and sewer system coverage levels are 45.2% and 18.6%, respectively.²
- 1.4 The Portoviejo River and Chico River are the water sources for the program's target area. Located at the middle watershed of the Portoviejo River is the Poza Honda dam, which is fed by other tributary watersheds. The city of Portoviejo is supplied by the Portoviejo River, and its Cuatro Esquinas water treatment plant has capacity of 989 liters per second. Its capacity is sufficient for the urban population of approximately 240,000 persons, but several outlying districts experience water pressure problems due to deficiencies in distribution and high system losses.³ Investments to reduce losses and improve the distribution system would increase pressure and expand coverage without having to upgrade the capacity of the water treatment plant. This also holds true for Colón Parish, one of the areas with unmet demand for water and sewer services. Built in 2001, the Cuatro Esquinas water treatment plant is overdue to have its water treatment pumping systems replaced with more modern, efficient equipment to improve productivity and reduce energy consumption and greenhouse gas emissions.

¹ Cantons are the second-level administrative division in Ecuador. The country's 221 cantons are subdivided into urban and rural parishes.

² Socioeconomic survey, 2019.

³ According to a diagnostic assessment of nonrevenue water, physical losses are estimated at 36.8% of the volume produced (Portoaguas, 2019).

- 1.5 The rural parishes are supplied by a combination of surface and underground water sources, with most of the latter built on private land by their owners.⁴ Water supplies cover the parish seats only partially and are intermittent, with service interruptions ranging from one day per week to 12 hours per day.⁵ Treatment systems are deficient or out of service, and distribution infrastructure is inadequate⁶ and in poor condition.⁷
- 1.6 The city of Portoviejo has a public sewer system and wastewater treatment plant. In rural areas, only San Plácido, Río Chico, and Crucita parishes have public sewer systems and wastewater treatment plants. In the other rural parishes, which have no sewer systems, 83% of households have improved or unimproved pit latrines,⁸ and of these only 38% maintain them in some way.⁹
- 1.7 Coverage and quality gaps have consequences for water and sanitation services delivery, and are an indicator of exposure to health risks,¹⁰ which is further exacerbated when these gaps occur in the poorest areas of the canton's rapidly growing rural parishes. This is important in light of the positive correlation¹¹ between environmental quality,¹² health,¹³ and access to water and sanitation services.
- 1.8 The deterioration of infrastructure, partly due to the effects of the country's 2016 earthquake, and the inadequate capacity and range of service coverage, point to the need to invest in the upgrading and expansion of infrastructure.¹⁴ The insufficient capacity of underground sources and quality-related problems in surface water sources call for the design of long-range distribution systems to reach appropriate capture points, thus increasing investment costs. At the same time, to reduce the pollution and improve the quality of surface water sources, investment in sewer and wastewater treatment infrastructure is essential.

⁴ The main sources are wells (64%) and tanks (25%); 8% of households are supplied by neighbors and/or relatives, and 2% from streams.

⁵ San Plácido receives water 10 hours per day, Calderón one day per week, San Gabriel two days per week, Pueblo Nuevo 12 hours per day, Río Chico one day per week, and Crucita from one to four days per week. (Comprehensive feasibility study and final design of water, sanitation, and storm drain systems for the canton's parishes, Portoviejo, 2018.)

⁶ Header tanks are used by 41% of households to store water; of that group, 82% utilize some type of chlorine-based treatment.

⁷ The quality of water from the public system is described by 9% of households as good; 47% as average; and 37% as poor. The main reason given is turbidity, especially during the rainy season.

⁸ In all, 83% of households lack piped sewer systems; of that group, 88% have septic tanks, 7% have latrines, and about 4% dump wastewater in open areas (Socioeconomic survey, 2019).

⁹ 62% of households perform no maintenance; the others maintain their systems every 10.36 months at a cost of US\$34.70 (Idem).

¹⁰ Intermittency of service can affect water quality. [Nelson and Erickson, 2016](#).

¹¹ Brenneman et al. (2002); Annette Prüss-Ustün et al. (2014); and Kremer et al. (2007).

¹² [Rodríguez-Jeangros et al. \(2018\)](#) model the effect of wastewater treatment on Bogotá River water quality.

¹³ [Wagstaff and Claeson \(2004\)](#), and [Schady \(2015\)](#) find that access to clean water and sanitation infrastructure help reduce infant mortality. [Conte Grand, M. and G. Coloma \(2009\)](#) found a significant correlation between increased water and sanitation coverage and reduced mortality.

¹⁴ Technical aspects of problems, factors, and dimensions relating to coverage and infrastructure ([optional link 1](#)).

Illustration 1. Geographic location



- 1.9 Urban and rural storm drain service coverage rates are 57% and 13%, respectively. The parish seats of Alajuela, Calderón, and Río Chico have water capture and distribution systems, while the other rural parishes do not. The existing infrastructure was built recently and is in fair to good condition, with the exception of sediment deposits in some cases and the conveyance of effluent and stormwater by the same pipes in others. The existing systems need to be expanded and require specific improvements in areas where stormwater accumulation or overflowing has been observed, especially on roads.
- 1.10 **Management of the municipal water and sewer utility.** Portoaguas was established in 1996 to provide sanitary sewer and stormwater drainage services. In 2004, it took over the management of water systems. Portoaguas has improved its management of those services, and, last year, increased water service coverage and revenue by 1% and 18.5%, respectively. From 2014 to 2018, the utility added 14,981 new residential customers (with 13,395 meters), and the number of its commercial customers increased by 1,519 (57%). However, nonrevenue water levels are close to 70%, well above best practices in the region.¹⁵ In 2018, Portoaguas covered 136% of its operating and maintenance costs with own revenue. While the utility has taken action to improve service delivery, these efforts have not included areas where Portoaguas does not currently provide services (paragraph 1.24).
- 1.11 **Sector institutional framework.** The Secretariat of Water (SENAGUA) is the sector's lead agency and is responsible for sector policy and strategic planning. The Water Regulatory and Oversight Agency (ARCA) is tasked with regulating water-related services. Under the 2014 Water Resources and Utilization Law, the decentralized autonomous governments (GADs) are responsible for the provision of water and sanitation services.

¹⁵ According to the [Association of Water and Sanitation Regulators of the Americas \(2013\)](#), the average rate of nonrevenue water is 41.5%; a rate of 30% is indicative of good management and 50%, poor management. [Brazil's National Sanitation Secretariat \(2019\)](#) estimates average water distribution losses (real and apparent) of 38.1%.

In that context, the GADMCP delegated responsibility for the delivery of these services to Portoaguas.

- 1.12 **Gender equity.** According to a recent World Bank study, women are underrepresented in technical and executive roles in water and sanitation utilities, despite the fact that they are significant water users and the primary decision makers regarding water use in the home.¹⁶ In Latin America, women account for more than 60% of the workforce in the services sector, but only 19.7% in the water sector.¹⁷ Women account for only 5% of Portoaguas's technical and operational staff. This low percentage reflects the fact that women face high barriers in the sector to being hired, retained, and promoted. This is attributable to a dearth of training opportunities, workplace harassment, the absence of women friendly facilities and infrastructure, the lack of professional development opportunities, and difficulty balancing work life and motherhood. Breaking down these barriers will help attract and retain a talented female workforce. This will help achieve the objectives of improved management, given the numerous benefits that the inclusion of women entails, including better financial performance, greater innovation, and improved service delivery and business management.¹⁸
- 1.13 To foster gender equality and women's participation, Portoaguas will need to undertake actions that promote the presence of women.¹⁹ The program will finance activities to break down barriers to access and training (e.g. a plumbing training program and recruiting plan for female engineers), and create and promote inclusive workplace environments and welcoming spaces (e.g. training plan in violence and harassment prevention²⁰ and facilities for mothers) ([optional link 9](#)).
- 1.14 **Disabled persons.** The characterization of disabled persons in Ecuador is based on the National Disabilities Registry. According to the registry, 460,564 disabled persons live in Ecuador, 10,004 of whom live in Portoviejo Canton. In 2008, Ecuador ratified the United Nations Convention on the Rights of Persons with Disabilities, which requires signatories to ensure equal, nondiscriminatory treatment of persons with disabilities in all areas of life. The designs of infrastructure to be financed under the program seek to facilitate access for persons with varying levels of disability in terms of sanitary facilities and physical access. The plans provide for support in adapting or building water treatment plant and wastewater treatment plant infrastructure and facilities, as applicable, in compliance with the technical design specifications set out in the regulations of Ecuador's Disabilities Act, Decree 171 of 5 December 2013, which requires GADs to undertake actions to increase accessibility.
- 1.15 **Local productive development, gender, and corporate social responsibility.** Private companies and government agencies are increasingly concerned with conducting themselves in a socially responsible manner. Accordingly, they are adopting systems focused on the common good and taking into account social, economic, and environmental concerns. Extensive empirical evidence has established a positive

¹⁶ [World Bank, 2019.](#)

¹⁷ [IDB, 2016.](#)

¹⁸ [World Bank, 2019.](#)

¹⁹ These activities are also aligned with the cantonal government's policies. In October 2018, the municipal council amended the Municipal Code to add a title on promoting gender equity and preventing gender-based violence.

²⁰ A survey of GADMCP and Portoaguas employees identified the need for this training, although no specific cases were reported.

correlation between a firm's engagement in socially responsible activities and its financial returns.²¹ Companies that undertake corporate social responsibility initiatives improve their gross margin because consumers are willing to pay more for the services of companies that adopt socially responsible practices.²²

- 1.16 In August 2017, the GADMCP's production management division began implementing the "post-earthquake civil society strengthening project," a local development initiative to stimulate economic activity and improve the population's well-being by supporting producer associations and business owners. Other ongoing programs include the "Water Guardians" program headed by Portoaguas, which focuses on children and adolescents in the cantonal schools; and the community volunteers program, focused on adult men and women, which promotes hygiene, the responsible use of water, and proper food handling and other practices ([optional link 9](#)). These programs promote women's leadership in awareness-raising activities in the areas of appropriate water use and hygienic practices. Support for the expansion of these activities will help improve the management and responsible use of water systems, given the evidence that women's leadership in community water committees is associated with more effective water systems management.²³
- 1.17 **Climate change.** Scientific literature predicts that climate change will produce marked changes in the temporal and spatial distribution of rainfall and temperatures, with significant consequences for local hydrological systems and aquatic life.²⁴ Specifically, the results of climate model simulations point to a high probability of evapotranspiration, causing large-scale changes in precipitation patterns and the frequency of extreme weather events.²⁵ Rising temperatures in combination with excess nutrients (phosphorous and nitrogen) in bodies of water such as lakes and reservoirs will heighten the risk of cyanobacteria outbreaks, particularly during the warmest months.²⁶ For Ecuador, despite the uncertainty typical of climate projection models for mountainous areas,²⁷ most of the models consulted point to a trend of increased intensification of rain, higher average annual rainfall, and an increase in the average temperature.
- 1.18 **Digital innovation.** The GADMCP has developed three systems (WorkFlow BPM, Gestión Financiera ERP, and SI-GESTION) to automate its processes from budget appropriation to contract close out, including requirements, designation of financing sources, procurement, and execution. The systems could be interoperable over the Internet with improved digital security, maintaining the balance between innovation and information security. Operation ATN/OC-17496-EC will finance a diagnostic assessment on the classification of public and protected data, system user authentication mechanisms, strengthening of the intranet, control of server software updates, data backups, firewall setup, and instilling a cybersecurity culture among GADMCP officials. The program will finance the cost of the equipment needed for digital information security.

²¹ [Rodríguez-Fernández \(2016\)](#) and [Hou \(2019\)](#).

²² [Palmer, 2012](#).

²³ [Mommen et al., 2017](#).

²⁴ Moreno et al., 2011 and Woodward et al., 2010.

²⁵ Buytaert, et al., 2010.

²⁶ Aguilera et al., 2018 and O'Neil et al., 2012.

²⁷ González-Seas et al., 2019.

- 1.19 **Proposed interventions.**²⁸ The program will build a new water supply system for rural parishes of the canton with capacity of 500 liters per second, which will meet both current and projected demand for the next 30 years. It provides for a water intake structure at the Poza Honda dam, distribution network, and a water treatment plant,²⁹ which will supply eight distribution tanks to be located in each parish seat and the community of San Gabriel. The tanks will supply the water distribution system for each locality, consisting of the water supply network, connections, and meters. Despite being located in rural parishes ([optional link 1](#)), the localities are densely populated. Moreover, supplemental financing of €10 million was approved from the Latin American Investment Facility, to be managed by the AECID. It will be used to finance water and sanitation systems³⁰ in outlying rural areas of the canton.
- 1.20 Assays of Poza Honda dam water quality found eutrophication. The potential algae blooms associated with that condition could result in drinking water with an unpleasant taste and odor, as well as pose problems for its treatment. The greatest concern is the appearance of cyanobacteria, some strains of which can produce toxins that are harmful to health. While specific pretreatment measures have been included for the water treatment plant, a water quality action plan should be implemented, to include monitoring and alert measures, training, operational management procedures, as well as updated equipment and trained staff. The program will finance this plan, which is expected to draw on lessons learned from similar experiences in Ecuador.³¹
- 1.21 In Colón Parish, the program will finance the construction of a pumping station at the Cuatro Esquinas water treatment plant, conveyance infrastructure, a distribution tank and network, and distribution system with connections and meters. This system will provide service to the projected population of 12,500 residents in 30 years' time.³² The works will include modern equipment for online supervision and monitoring of operations.
- 1.22 The program will finance the construction of sanitary sewer networks and associated wastewater treatment plants and pumping stations in Colón and five rural parish seats. These will be small wastewater treatment plants with similar characteristics to facilitate their operation.³³ The construction of stormwater drainage works will be financed to prevent the overflow and ponding of stormwater, thereby protecting the sewer system from infiltration.³⁴

²⁸ Details of contributing factors and proposed interventions ([optional link 12](#)).

²⁹ The GADMCP will finance the construction of a high-voltage transmission line to supply the wastewater treatment plant with electricity (paragraph 2.5).

³⁰ Local drinking water systems and individual or condominium sanitation solutions.

³¹ The experience with Quito's water and sanitation company (EMAPS) and the reservoirs supplying water systems that are being financed by operation 4759/OC-EC.

³² Cuatro Esquinas, El Naranjo, Los Ángeles, San Ignacio and El Cady districts.

³³ The upflow anaerobic sludge blanket (UASB) treatment process is fully developed in Brazil ([Urban Wastewater Treatment in Brazil](#)).

³⁴ A number of studies demonstrate the effectiveness of interventions. [Jha, A.K et.al \(2012\)](#), present over 50 case studies of projects implemented in urban contexts. While no rigorous impact studies exist, there is empirical evidence of the correlation between flooding risk and well-being, measured by residential property values. [Bin, O. and J. B. Kruse \(2006\)](#) and [Shultz, S. D. and P. M. Fridgen \(2001\)](#) conclude that homes built in vulnerable areas have lower market values than those built in safe areas.

- 1.23 In order to improve operational efficiency, service levels, and optimize resources, the program will include actions to reduce nonrevenue water rates. The water systems projects to be financed include sectorization works, pressure regulation, and stream flow measurement and control,³⁵ as well as the identification and repair of leaks by disconnecting older systems in poor condition that continue operating in parallel with the new systems. These actions will have a direct impact on unmet demand and the capacity to supply service areas identified for expansion, such as Colón. Simultaneously, the addition of new, more efficient pumping systems in the Cuatro Esquinas water treatment plant will reduce electricity consumption. The effectiveness of the proposed interventions is demonstrated by studies of waterworks projects in similar contexts, which estimate the potential electricity savings resulting from the replacement of motors, pumps, and drive systems, and reduction of nonrevenue water at 5% to 20%, respectively.³⁶
- 1.24 These works will enable Portoaguas to provide service in all rural parishes instead of the municipal water boards, which are nonprofit entities established by local residents to supply their own water needs in areas not covered by the public utility. Portoaguas has not yet established a presence in this area slated for service expansion, which includes some communities in which users are not accustomed to paying for these services.³⁷ This suggests the need to consider social management and a business model for the new service areas. Following the expansion, Portoaguas will be operating a system that is nearly 50% larger than its current one, which will include two additional water treatment plants and six wastewater treatment plants. This will require the procurement of operating and maintenance equipment.
- 1.25 In addition to supporting the expansion and improved management of Portoaguas, the resilience and reliability of the water and sanitation system will be strengthened. Updating the water and sanitation master plans is especially important, to include climate change and water security considerations, as well as the development of innovative projects³⁸ to effectively manage these services.
- 1.26 **Bank knowledge of the sector.** The Bank has been supporting Ecuador in the water and sanitation sector for the past last two decades. Programs of particular relevance include the Rural Sanitation and Water Infrastructure Program (operation 2377/OC-EC) and the National Investment Program in Water, Sanitation, and Solid Waste (operations 3232/OC-EC and 3233/CH-EC), executed by the Ecuador's development bank (Banco del Estado) and SENAGUA, respectively, to expand and improve access to water and sanitation and solid waste treatment, with emphasis on medium-sized rural GADs. The Investment Program for the Development of Decentralized Autonomous Government and/or their State-owned Enterprises, Phase I (operation 2839/OC-EC), executed by Banco del Estado to support GADs with priority projects through an integrated, long-term approach combining infrastructure financing with operational and financial strengthening. In addition, the Bank has recently supported the cities of Quito and Cuenca. In Quito, the implementation of the Metropolitan Quito Environmental Sanitation Program, Phase I (operation 1424/OC-EC; 2002-2007), and Phase II (operation 1802/OC-EC; 2006-2014), which aimed to improve the coverage and quality of those services, achieved very successful outcomes. In Cuenca, the Bank financed the Water Supply and Sanitation

³⁵ [Arniella, 2017](#).

³⁶ [Pedraza et al., 2016](#).

³⁷ The collection efficiency of municipal water boards varies widely, from 41% to 100%.

³⁸ [Mastranlego, 2018](#).

Program for Cuenca (operation 1753/OC-EC), which aimed to efficiently and sustainably meet the city's demand for water and sanitation services.

- 1.27 **Lessons learned.** The main lessons learned from previous operations in the sector include: (i) the need for an integrated approach to projects that considers infrastructure needs, as well as support for the management and sustainability of investments; (ii) the importance of designing a rate system that facilitates, at minimum, the recovery of operating and maintenance costs; (iii) the need to address environmental and social considerations starting with the project design phase, and to encourage the population's involvement; and (iv) for projects executed by GADs, as in this case, the importance of forming executing units with administrative and fiduciary autonomy and qualified staff to ensure the proper and timely execution of projects.
- 1.28 **National government strategy for the sector.** The program is aligned with and will further the objectives of the national government's National Development Plan 2017-2021,³⁹ which aims to "ensure a decent life with equal opportunity for all," since it will expand and improve water and sanitation services. It is also aligned with the National Water and Sanitation Strategy,⁴⁰ which aspires to "universal access to these services, ensuring their quality and sustainability."
- 1.29 **Strategic alignment.** The program is consistent with the IDB Group Country Strategy with Ecuador 2018-2021 (document GN-2924) and aligned with the strategic objective, "strengthen and support water and sanitation investment projects." It is consistent with the Update to the Institutional Strategy 2010-2020 (document AB-3008) insofar as: (i) it is aligned with the development challenge of social exclusion and inequality because its interventions focus on expanding and improving the inclusive delivery (access and quality) of water and sanitation services; and (ii) the development challenge of low productivity and innovation, insofar as it will implement a management system at Portoaguas and promote the adoption of new operating technologies geared toward optimizing costs and improving water quality monitoring. The program is also aligned with the crosscutting themes of: (i) gender and diversity, since it provides for actions with a gender focus (paragraph 1.38) and infrastructure designed to facilitate access for persons with disabilities (paragraph 1.36); (ii) institutional capacity and the rule of law, since it will support improvements in GADMCP and Portoaguas management capacity (paragraph 1.37); and (iii) climate change and environmental sustainability, because the program, in line with Ecuador's National Climate Change Strategy 2012-2025, aims to reduce the vulnerability of water and sanitation infrastructure to the effects of climate change as regards the frequency and intensity of extreme precipitation events. The program also contributes to the reduction of greenhouse gas emissions through: (i) investments in energy efficiency (more efficient pumping equipment), (ii) reduction of losses in drinking water systems, which will reduce pumping costs and energy consumption, and finally (iii) improvements in wastewater treatment (methanol reduction). The percentage of this IDB operation's proceeds invested in activities that contribute to mitigation and adaptation is 13.11%, in accordance with the [multilateral development banks' joint methodology for estimating climate change financing](#). Those resources contribute to the IDB Group target of increasing financing for climate change-related projects to 30% of all operation approvals by year-end 2020.

³⁹ [Toda una Vida. Plan Nacional de Desarrollo 2017-2021.](#)

⁴⁰ [Estrategia Nacional de Agua Potable y Saneamiento.](#)

- 1.30 In addition, the operation will contribute to the Corporate Results Framework 2016-2019 (document GN-2727-6) through the outputs “households with new or improved access to drinking water,” “households with new or improved access to sanitation,” and “households with treated wastewater.” The program is aligned with the Sustainable Infrastructure for Competitiveness and Inclusive Growth Strategy (document GN-2710-5) in the priority area of supporting the construction and maintenance of sustainable social and environmental infrastructure to help improve living conditions; and consistent with the dimensions of success and lines of action set out in the Water and Sanitation Sector Framework (document GN-2781-8) of universal access, improved quality of services, and social and environmental sustainability. Lastly, the operation is included in the Update of Annex III of the 2019 Operational Program Report (document GN-2948-2).
- 1.31 The infrastructure is considered sustainable in accordance with the priority attributes of the Sustainable Infrastructure Framework,⁴¹ particularly its economic (paragraph 2.6), financial (paragraph 2.8), environmental and social (paragraph 2.3), and institutional attributes (paragraph 1.37); demonstrating satisfactory economic and social returns over the life cycle; operating returns; energy efficiency, with actions to strengthen the drinking water system’s resiliency to climate change and reduce greenhouse gases associated with treatment processes; and actions to promote gender inclusion and incorporate technological advances and innovation.
- 1.32 **Consistency with the Public Utilities Policy.** The objectives of the program and the national sector are consistent with the principles of Public Utilities Policy (Operational Policy OP-708, document GN-2716-6) and meet the conditions of financial sustainability and economic evaluation. Portoaguas covers its costs with receipts from invoiced services; the utility’s financial projections indicate that it will continue to cover its costs going forward (paragraph 2.8). Moreover, the works to be financed are socioeconomically viable (paragraph 2.6) ([optional link 5](#)).
- 1.33 **Local productive development.** Financing will be provided for a marketing plan, providing continuity with the “post-earthquake civil society strengthening project” (paragraph 1.15). Financed by the European Union, the project will support producer associations. These activities are expected to build community capacity and improve the population’s well-being, which will in turn help increase water service receipts and mitigate economic barriers to residential connections to the sewer system. The support for producer associations will contribute to women’s empowerment, since they account for roughly 60% of association members.
- 1.34 **Innovative aspects.** The program provides for: (i) the incorporation of energy-saving technologies in electromechanical equipment; (ii) the AquaRating tool for Portoaguas, to provide and begin implementing an improvement plan; and (iii) implementation of Hydro-BID Flood software in Río Chico.

⁴¹ [IDB, 2018](#).

B. Objectives, components, and cost

- 1.35 The program's general objective is to support the GADMCP in its efforts to improve water and sanitation services in Portoviejo Canton, which will help achieve the objectives of the national government's "Water and Sanitation for All" program,⁴² improving environmental conditions in the canton as well as living conditions for its residents. Its specific objectives are to: (i) expand and improve access to water and sanitation services, taking into account the impacts of climate change; and (ii) improve the management of water and sanitation services through the implementation of nonrevenue water and energy efficiency programs, as well as operational and social management actions in the service areas slated for expansion.
- 1.36 **Component 1. Expanding and improving water, sanitation, and stormwater drainage systems in rural parishes of Portoviejo Canton (US\$111.81 million).** The program will finance the water supply system in for rural parishes, including common water catchment works, water treatment plants, water supply lines, water distribution tanks, pumping stations, and distribution networks, connecting them to each of the rural parish capitals and surrounding areas, as well as Colón. It will also finance sanitation systems (pipe networks, connections, conveyance infrastructure, pumping stations, and wastewater treatment plants in rural parishes lacking these systems and in the urban parish of Colón; and stormwater drainage systems to address localized problems of ponding or overflows. Studies will be financed to supplement and optimize designs and technical bidding documents. The designs of water treatment plants, wastewater treatment plants, and other facilities will comply with technical specifications to facilitate access for persons with disabilities (paragraph 1.14).
- 1.37 **Component 2. Improving management of water and sanitation services in Portoviejo Canton (US\$6.5 million).** The program will finance actions to improve Portoaguas's management of water and sanitation services, including measures to reduce nonrevenue water and enhance energy efficiency; procure operating and maintenance equipment; prepare and/or update master plans and rate studies; develop a business management model for new service areas and a business system; and prepare and implement water quality plans and a social and community sustainability program.
- 1.38 Based on a diagnostic assessment (paragraphs 1.12, 1.13, 1.15, and 1.16), the program will finance the following: (i) development of a GADMCP training plan on preventing workplace violence and harassment; (ii) adaptation of restroom infrastructure in two GADMCP customer service buildings and Portoaguas facilities to install lactation and diaper changing stations; (iii) expansion of the community volunteers program to provide training in the areas of health, hygiene, responsible water use, women's rights, and violence prevention; (iv) a plumbing training program for men and women, to provide technical support to Portoaguas in meter installation and maintenance tasks; (v) replication of the Water Guardians program, which is currently implemented in schools, in rural parishes to strengthen women's leadership in the communities; (vi) plan to recruit women engineers through apprenticeships with Portoaguas technical divisions; and (vii) a marketing plan for products and services involving women of the canton.

⁴² With the objective of "ensuring a decent life with equal opportunity for all," under its Focus Area 1 "Lifelong Rights for All."

- 1.39 **Management (US\$3.75 million).** The program will finance key members of the program management unit (PMU), technical equipment to improve GADMCP systems, multiyear financial audits, midterm and final evaluations, and monitoring activities.

C. Key results indicators

- 1.40 The results matrix (Annex II) presents the program outputs and outcomes. Table I-1 includes the key indicators.

Table I-1. Key indicators

Outcome indicator	Unit of measurement	Baseline	Target
New households with access to the water system in the target area	Household	0	14,194
Households with wastewater treated in the sanitation expansion area	Household	0	5,500
Average continuity of water service in the target area	Hours per day	16	24
Energy consumption per volume of water pumped into the Cuatro Esquinas water treatment plant	kWh per cubic meter	0.44	0.38

- 1.41 **Benefits and beneficiaries.** The program benefits are improved environmental quality of the parishes, especially in terms of health conditions, as measured by the number of households with access to the wastewater treatment system (5,500 households); and in terms of water security and living conditions, as measured by the number of households with access to new or upgraded water service (23,600 households) kilometers of roads that are no longer subject to flooding after the installation of stormwater drainage systems. The program’s direct beneficiaries will be some 82,000 individuals (23,600 households) in the parishes of San Plácido, Alajuela, Chirijos, Abdón Calderón (including San Gabriel), Pueblo Nuevo, Río Chico, and Crucita, as well as the urban parish of Colón. The program will also benefit Portoaguas through interventions to build planning and operational management capacity.

II. FINANCING STRUCTURE AND MAIN RISKS

A. Financing instrument

- 2.1 **Financing mechanism, structure, and cost.** This operation is structured as a specific investment loan for a total of US\$122,058,155, of which US\$27.5 million will be financed with Ordinary Capital resources. The remaining financing will be provided by the European Investment Bank, FONPRODE, and the local counterpart contribution. With respect to FONPRODE, the Bank will act as the program administrator under the joint financing structure and provide supervision services as stipulated in the Framework Agreement signed with the Kingdom of Spain. The European Investment Bank loan will be provided under a parallel financing arrangement. The financing is subject to internal approval processes at both entities, and is expected to be approved in the first half of 2020. The local counterpart contribution is US\$17,673,107. Table II-1 presents the consolidated budget.
- 2.2 The disbursement period is five years,⁴³ consistent with the multiyear execution plan ([required link 1](#)). This period takes into account the complexity associated with the program’s three sources of financing as well as the GADMCP’s lack of experience in executing similar programs. The disbursement schedule is presented in Table II-2.

⁴³ The following measures are planned to ensure adherence to the disbursement schedule: (i) contracting of support for management, planning, control, and supervision of works; and (ii) preparation of all projects to be financed.

Table II.1. Estimated costs (US\$ millions)

Component	IDB	FONPRODE	EIB	Local counterpart	TOTAL	%
Component 1. Expanding and improving water, sanitation, and stormwater drainage systems in rural parishes of Portoviejo Canton	20.47	14.88	59.89	16.58	111.81	91.6
Preinvestment and inspection of works	1.45	0.71	2.85	0.60	5.61	4.6
Drinking water treatment systems	8.52	6.35	-	6.93	21.80	17.9
Distribution and storage systems	-	-	33.24	3.99	37.23	30.5
Water distribution systems	7.26	5.41	11.27	2.87	26.81	22
Sewer and storm water drainage systems and wastewater treatment plants	3.24	2.41	12.52	2.18	20.35	16.7
Component 2. Improving management of water and sanitation services in Portoviejo Canton	4.68	1.12	-	0.70	6.50	5.3
Program management	2.35	1.00	-	0.40	3.75	3.1
Administration and monitoring	2.00	1.00	-	0.36	3.36	2.8
Audits and evaluations	0.35	-	-	0.04	0.39	0.3
Total	27.50	17.00	59.89	17.68	122.06	100

Table II-2. Disbursement schedule (US\$ millions)

Source/year	1	2	3	4	5	Total
IDB	0.80	6.58	11.44	6.93	1.75	27.50
FONPRODE	0.32	1.80	7.50	6.12	1.27	17.00
European Investment Bank	-	-	26.68	25.09	8.12	59.89
Local counterpart	0.13	0.83	8.29	6.80	1.61	17.67
Total	1.25	9.21	53.91	44.94	12.74	122.06
%	1	8	44	37	10	100

B. Environmental and social safeguard risks

2.3 In accordance with the IDB Environment and Safeguards Compliance Policy (Operational Policy OP-703), this is classified as category “B” operation, with moderate risk relating to natural disasters and a moderate environmental and social risk indicator. No significant impacts were identified, the most notable being those produced during the construction phase. The most important impacts are related to the appropriation of property, which could partially affect an estimated 40 rural/agricultural properties during the process of acquiring rights-of-way. To manage these impacts, a compensation and livelihood restoration plan was prepared and submitted for consultation. The operation will not entail involuntary resettlement. During the due diligence review, it was confirmed that an environmental and social analysis (ESA), including the environmental and social management plan (ESMP), have already been prepared and are published on the [IDB’s website](#). All the impacts can be managed through the mitigation measures identified in the ESA and ESMP. The program will have no effect on indigenous peoples, critical habitats, protected areas, or cultural sites. The risk of type-1 scenarios defined for the program is moderate, and is associated with earthquakes, heavy rains, and possible flooding and landslides. The projects are not expected to exacerbate type-2 disaster risk scenarios. No significant environmental impacts are anticipated. Meaningful stakeholder consultations were held in 2017 and 2019. The main comments received concerned the delineation of the program’s area of influence and access to services during the construction phase. As a result of the consultations, the following measures were agreed upon: (i) outreach activities would be held prior to the start of the works; (ii) mitigation measures would be properly implemented, and (iii) a complaints mechanism would be implemented to promptly identify potential impacts.

C. Other risks and key themes

- 2.4 **Other risks.** A heightened risk for macroeconomic and fiscal sustainability considerations was identified: delays due to lack of budget appropriation of GADMCP resources, to be mitigated by including a condition precedent to the first disbursement and a special condition for execution requiring annual budget appropriations. Two medium-level risks were identified in the areas of public management and governance: (i) a potential delay of at least six months in program startup if the PMU is not formed by year-end 2019, to be mitigated by: (a) including a condition precedent to the first disbursement requiring that the PMU be formed, and (b) preparing position profiles and startup of the selection process for key personnel in parallel with program design; (ii) delays in the installation of the electrical transmission line, resulting in delayed commissioning of the water treatment plant, to be mitigated by including a special condition for execution requiring CNEL approval of transmission line designs and signature of an interagency agreement between CNEL and the GADMCP providing for GADMCP financing of the transmission line. Lastly, a medium-level development risk was identified: insufficient Portoaguas resources for adequate operations and maintenance, to be mitigated by including activities to help reduce costs and boost revenue.
- 2.5 **Technical feasibility.** The program's technical feasibility is supported by the technical studies of its infrastructure works. These studies were prepared by specialized consulting firms in accordance with the appropriate technical guidelines. The designs for roughly 90% of the amount of works include an advanced level of detail. Some fine-tuning and supplemental designs are still needed and will be completed prior to the competitive bidding of works ([optional link 1](#)). Special contractual conditions for execution have been established to ensure the supply of electricity to the water treatment plant by installing the required transmission line.
- 2.6 **Economic feasibility.** The evaluation of the program's projects was based on a comparison of the costs and benefits both with and without the program. The economic benefits of the project to collect and treat wastewater were quantified using the willingness-to-pay value (i.e. US\$14.73 per household per month), which was calculated using the contingent valuation method, based on socioeconomic surveys conducted in June 2019. The benefits of the wastewater treatment project were quantified using the public works simulation model. The costs considered in the evaluation were the incremental investment costs and operating and maintenance costs, excluding taxes and fees (social prices). The results of the evaluation show that the operation is socioeconomically viable, with internal rates of return above 12% and cost/benefit ratios greater than 1. The evaluation was supplemented by the corresponding sustainability analysis ([optional link 2](#)).
- 2.7 **Ability to pay.** Portoaguas will ensure that the beneficiary population's monthly bill for water and sanitation services is less than 5% of the monthly household income based on income quintile, current Portoaguas rates, and average residential consumption. Portoaguas also plans to include reduced rates for vulnerable groups within its rate schedule.
- 2.8 **Financial sustainability.** The financial analysis of Portoaguas, which is responsible for operations and maintenance after the construction phase, used financial projections based on the utility's operational and financial information. In recent years, Portoaguas improved its coverage of current expenditure (excluding capital expenditure) with own current revenue from 110% in 2016 to 136% in 2018, enabling it to finance small-scale

investments. The financial projections indicate that it will continue to be operationally self-sustaining and could also continue to finance small-scale investments by implementing: (i) activities to ensure the sustainability of rural systems, including a rate study and community management; and (ii) actions to enhance efficiency, including reducing nonrevenue water and implementing energy efficiency measures (paragraph 1.37). The results matrix includes an indicator for monitoring coverage of operating costs ([optional link 3](#)).

- 2.9 **Financial evaluation of the GADMCP.** The projected flow of financial resources meet the requirements for the ability to pay analysis and borrowing limits established by the Ministry of Economy and Finance. The Planning and Public Finances Code (COPFP) establishes borrowing limits on the basis of two indicators: (i) total public debt as a percentage of total annual revenue excluding borrowing; and (ii) total annual debt service as a percentage of total annual revenue excluding borrowing. The general limits for the first and second indicators are 200% and 25%, respectively; for water, sanitation, and integrated solid waste management projects, the limits are increased to 300% and 40%, respectively, according special priority to the sector. The cash flows indicate that: (i) during the period 2023-2027, the total public debt indicator will exceed 200%, which will enable the GADMCP to comply with COPFP requirements but will limit its ability to borrow for projects outside the water and sanitation sector; and (ii) the debt service indicator will remain at a reasonable level, peaking at 15% in 2028 ([optional link 8](#)).
- 2.10 **Institutional feasibility.** The institutional assessment of the GADMCP was conducted using the Institutional Capacity Assessment System (ICAS) methodology. It identified opportunities for improvement in: (i) project management, owing primarily to the GADMCP's limited experience in contracting infrastructure works exceeding US\$2 million with external financing; (ii) technical quality management: because the GADMCP executes projects through its municipal public enterprises, the relationship between the GADMCP and Portoaguas must be strengthened to ensure adequate, documented, and timely technical monitoring; (iii) human resources management, insofar as the practice of hiring under short-term contracts generates high turnover, undermining continuity; (iv) procurement management: only limited approval authority is delegated to the technical team, delaying precontracting processes; while the GADMCP has automated its processes to improve performance, delegation mechanisms are still needed to reduce contracting times; (v) financial management, in light of the GADMCP's limited experience with external financing and the delegation of payment authority, causing delays in both these areas; and (vi) environmental and social safeguards management, in regard to limited staff and lack of experience with similar projects. The main recommendations include: (i) forming a PMU as a permanent GADMCP unit that would report to the office of the parish chief executive. The PMU should have administrative, financial, and legal autonomy and include key specialized personnel and support staff. It should use the systems already in place at the GADMCP, which will adapt its processes to ensure the PMU's autonomy, adequate internal control, and full use of institutional systems. The PMU should have adequate physical space and effective processes to properly manage program files; and (ii) support to adapt the procurement processes in the GADMCP's WorkFlow BPM, to ensure the flow of goods and services and compliance with procurement policies.

III. IMPLEMENTATION AND MANAGEMENT PLAN

A. Summary of implementation arrangements

- 3.1 **Borrower, executing agency, and guarantor.** The borrower⁴⁴ and executing agency will be the GADMCP. The Republic of Ecuador will be the guarantor of financial obligations arising from the loan.⁴⁵
- 3.2 **Execution arrangements.** The GADMCP will execute the program through a PMU that will be responsible for planning, programming, management, procurement, contracting, reporting, requesting disbursements, coordinating the inspection of works and other planned execution actions, monitoring and evaluating program execution, and other responsibilities specified in the program Operating Regulations.
- 3.3 As provided by the Ecuadorian constitution, the COPFP, and the Regional Organization, Autonomy, and Decentralization Code (COOTAD), the GADMCP⁴⁶ is responsible for, *inter alia*, administering the canton, which is autonomous from the central government. Its responsibilities include providing water, sanitation, and stormwater drainage services, through Portoaguas, to urban areas and several rural parishes.
- 3.4 **Program management unit.** Created by administrative resolution, the PMU will consist of a trained, paid team forming part of the GADMCP structure. At minimum, its staff will include: (i) a manager; (ii) a financial specialist; (iii) a procurement specialist; (iv) a planning and monitoring specialist; (v) a water and sanitation technical team; and (vi) an environmental and social specialist. It will have delegated authority to operate with administrative, financial, and legal autonomy. The GADMCP will determine the physical location of the PMU in a way that ensures effectiveness and efficiency in coordinating with other areas involved in program execution. The remuneration of PMU staff will be based on the required staff profiles and market-based salaries in the private sector for these positions, to be financed with IDB resources budgeted in the program investment account, in compliance with Executive Order 858/2019.
- 3.5 **Program Operating Regulations.** The program Operating Regulations will include: (i) a legal-institutional framework; (ii) a description of the program and its purpose, objectives, and components; (iii) the structure and organization of the PMU, including an organizational diagram, functions, responsibilities, and procedures; (iv) the use of proceeds and eligibility criteria for investments; (v) fiduciary annexes with flows and the precontractual and contractual procedures applicable to procurement, payments, financial programming, disbursements, expenditure reporting, and audit of the program financial statements; (vi) ESMP; (vii) monitoring and evaluation mechanism; (viii) program implementation arrangements; and (ix) coordination with other funding sources and Portoaguas ([optional link 4](#)).
- 3.6 **Procurement plan.** The procurement plan will contain: (i) a list of procurement items; (ii) the procurement methods for works, goods, and consulting services; (iii) amounts, financing source, and estimated time frames; and (iv) supervision method. Goods, works, and consulting services will be procured in accordance with the Policies for the

⁴⁴ The GADMCP meets the criteria for eligible borrowers established by Operational Policy OP-301.

⁴⁵ Under Operational Policy OP-303, loans to subnational entities may require guarantees of payment obligations but not of the local counterpart contribution or performance obligations.

⁴⁶ [Gobierno Autónomo Descentralizado Municipal del Cantón Portoviejo. Transparencia.](#)

Procurement of Goods and Works Financed by the Inter-American Development Bank (document GN-2349-9) and the Policies for the Selection and Contracting of Consultants Financed by the Inter-American Development Bank (document GN-2350-9) or subsequent updates thereof. Any proposed revision of the procurement plan will be submitted to the Bank annually or as required for approval.

- 3.7 **Disbursements and advance of funds.** Disbursements will be made by advances of funds to a specific account at the Central Bank of Ecuador, as required to meet program liquidity needs. The advances will cover liquidity needs for up to six months of execution. At the request of the borrower or the executing agency, the Bank may disburse funds in the form of reimbursements or direct payments.
- 3.8 **Retroactive financing and recognition of expenditures.** The Bank may retroactively finance, against the loan proceeds, up to US\$5.5 million (20% of the proposed loan amount) and recognize, against the local counterpart, up to US\$3,534,621.40 (20% of the estimated local counterpart contribution) in eligible expenses incurred by the borrower prior to the loan approval date. Under Component 1, these include retroactive financing/recognition of expenditures for the purchase and/or expropriation of land for program works and services; and, under program administration, for goods and services procured to establish the PMU, provided that requirements substantially similar to those established in the loan contract have been met. Such expenditures will have been incurred on or after 15 July 2019 (the project profile approval date), but under no circumstance include expenses incurred more than 18 months prior to the loan approval date.
- 3.9 **Audits.** The external audit of the program, including all sources of financing, will be conducted by an external accounting firm acceptable to the Bank and contracted with proceeds of the loan based on terms of reference agreed upon with the Bank.
- 3.10 **Special contractual conditions precedent to the first disbursement of the loan:** (i) the borrower will have formed a program management unit that is operating with sufficient administrative, financial, operational, and legal capacity to execute the program; and its staff will have been contracted or appointed in accordance with the terms of reference and profiles included in the program Operating Regulations; (ii) the program Operating Regulations, to include an environmental and social management plan as an annex, will have been approved and entered into force in accordance with the terms and conditions previously agreed upon with the Bank; and (iii) the executing agency will have presented evidence, to the Bank's satisfaction, that resources have been allocated for the first year of program execution, duly approved by the Portoviejo Municipal Council, to include the allocation of external financing resources and own resources in accordance with the program's financial plan. These conditions are key to ensuring timely and satisfactory program execution (paragraph 2.4).
- 3.11 **Special contractual conditions of execution:** (i) during the program execution period, the executing agency agrees to present to the Bank's satisfaction, in the final quarter of each year, the budget appropriation duly approved by the Portoviejo Municipal Council for the following calendar year of program execution, to include the allocation of external financing resources and own resources in accordance with the program financial plan; and (ii) prior to the award of construction contracts for the water treatment plant and water supply lines: (a) the executing agency will have presented CNEL-approved designs for the electrical transmission line to supply the water treatment plant; and (b) an interagency agreement will have been signed by CNEL and the borrower, authorizing the GADMCP to

finance and build the electrical transmission line. These conditions are required to ensure satisfactory execution and the availability of electricity for the water treatment plant (paragraph 2.4).

- 3.12 **Operation and maintenance.** During the execution period, the borrower agrees to: (i) adopt necessary measures to ensure that the works and equipment financed by the program are maintained in accordance with generally accepted technical standards; and (ii) submit to the Bank a report on the condition of works and equipment and the annual maintenance plan. If it is determined from the Bank inspections or reports it receives that the maintenance fails to adhere to agreed-upon levels, the borrower will adopt the necessary measures to correct such deficiencies.

B. Summary of arrangements for monitoring results

- 3.13 **Monitoring.** The executing agency will prepare progress reports. The monitoring arrangements will include the procurement plan, the multiyear execution plan, the annual work plan, the results matrix, the project monitoring report, and risk management. The executing agency will submit semiannual progress reports detailing results obtained and an action plan for the following period within 60 days after the end of each six-month period ([required link 2](#)).
- 3.14 **Evaluations.** A midterm evaluation will be conducted after 30 months of execution, to be followed by a final evaluation once 90% of the loan proceeds have been disbursed. The evaluation mechanism proposed consists of ex ante and ex post evaluations of the interventions to verify the achievement of targets. An ex post economic evaluation will be conducted, based on the ex ante evaluation methodology but may include adjustments, as detailed in the monitoring and evaluation plan ([required link 2](#)). The program will use the quasi-experimental differences-in-differences methodology to measure the program's impact on property values in the target area.

Development Effectiveness Matrix		
Summary		EC-L1248
I. Corporate and Country Priorities		
1. IDB Development Objectives	Yes	
Development Challenges & Cross-cutting Themes	-Social Inclusion and Equality -Productivity and Innovation -Gender Equality and Diversity -Climate Change and Environmental Sustainability -Institutional Capacity and the Rule of Law	
Country Development Results Indicators	-Households with new or upgraded access to drinking water (#)* -Households with new or upgraded access to sanitation (#)* -Households with wastewater treatment (#)*	
2. Country Development Objectives	Yes	
Country Strategy Results Matrix	GN-2924	Strengthen and promote investment projects in water and sanitation.
Country Program Results Matrix	GN-2948-2	The intervention is included in the 2019 Operational Program.
Relevance of this project to country development challenges (If not aligned to country strategy or country program)		
II. Development Outcomes - Evaluability		Evaluable
3. Evidence-based Assessment & Solution	9.7	
3.1 Program Diagnosis	3.0	
3.2 Proposed Interventions or Solutions	4.0	
3.3 Results Matrix Quality	2.7	
4. Ex ante Economic Analysis	10.0	
4.1 Program has an ERR/NPV, or key outcomes identified for CEA	3.0	
4.2 Identified and Quantified Benefits and Costs	3.0	
4.3 Reasonable Assumptions	1.0	
4.4 Sensitivity Analysis	2.0	
4.5 Consistency with results matrix	1.0	
5. Monitoring and Evaluation	10.0	
5.1 Monitoring Mechanisms	2.5	
5.2 Evaluation Plan	7.5	
III. Risks & Mitigation Monitoring Matrix		
Overall risks rate = magnitude of risks*likelihood	Medium	
Identified risks have been rated for magnitude and likelihood	Yes	
Mitigation measures have been identified for major risks	Yes	
Mitigation measures have indicators for tracking their implementation	Yes	
Environmental & social risk classification	B	
IV. IDB's Role - Additionality		
The project relies on the use of country systems		
Fiduciary (VPC/FMP Criteria)	Yes	Financial Management: Budget, Treasury, Accounting and Reporting. Procurement: Information System, Price Comparison, National Public Bidding.
Non-Fiduciary		
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:		
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project	Yes	EC-T1416. Support for the Preparation of the Water, Sanitary and Storm Sewer Program in Rural Parishes of the Canton of Portoviejo. The objective of this Technical Cooperation (TC) is to support the GADMP in the preparation of the Drinking Water and Sewerage Program of the Municipality of Portoviejo, including: i) update of feasibility studies, economic, environmental evaluation and final designs; and ii) design the management model for water and sanitation services in rural areas as well as design an improvement plan for PORTOAGUAS.

Note: (*) Indicates contribution to the corresponding CRF's Country Development Results Indicator.

The objective of the program is to support the Autonomous Decentralized Municipal Government of the Portoviejo Canton in improving Water and Sanitation (W&S) services in the Portoviejo Canton, contributing to the fulfillment of the objectives of the National Government's Water and Sanitation for All Program, also contributing to the improvement of the environmental conditions of the Canton and the quality of life of its inhabitants. The specific objectives are: (i) expand and improve access to W&S services taking into account the impacts of Climate Change (CC); and (ii) improve the management of W&S services through programs of Non-Accounted Water, Energy Efficiency and operational and social management actions in the areas of service expansion.

The documentation presents a solid diagnosis, which describes the W&S sector in Portoviejo, and the conditions and needs of the systems in the intervention areas. Water, sanitation, and storm drain coverage gaps and deficiencies in service quality are identified. Management challenges of the municipal company Portoaguas-EP are highlighted.

To mitigate these problems, the Program will implement two components: Expansion and improvement of Potable Water and sewerage systems in several parishes of the Portoviejo Canton; and Improvement of the management in the provision of W&S services in the Portoviejo Canton. The proposed solution is linked to the problems identified. Evidence is presented on the effectiveness of these types of programs. The results matrix (RM) reflects the objectives of the program and shows a clear vertical logic. The baseline values and targets of the main indicators are consistent with the economic analysis. Most of the result indicators are SMART. Product, outcome and impact indicators have baseline values, targets, and means to collect information.

Three Cost-Benefit analyzes are performed — drinking water, sanitation and sewage treatment, and a global one. The main costs and benefits are properly identified and quantified. The assumptions are reasonable and supported with administrative data and a household survey. Individual analyzes show an internal rate of economic return (IERR) greater than 12%. Globally, the IERR is 19.34% and the net economic present value (NEPV) is US \$57.9 million. Sensitivity analyzes are performed; these modifications do not present significant changes to the NEPV or IERR.

The monitoring and evaluation plan proposes three evaluations: ex post cost-benefit analysis; reflexive evaluation; and an impact evaluation based on the quasi-experimental method of Differences-in-Differences using administrative data from the Land Registry of the Portoviejo Canton.

The identified risks seem reasonable and are classified as low risk (4), medium (3) and high (1). All risks include a management strategy, activities, responsible parties, and date or triggers.

RESULTS MATRIX

Project objective:	The program's general objective is to support the Decentralized Autonomous Municipal Government of Portoviejo Canton (GADMCP) in its efforts to improve water and sanitation services in Portoviejo Canton, which will help achieve the objectives of the national government's "Water and Sanitation for All" program and improve environmental conditions in the canton as well as living conditions for its residents. Its specific objectives are to: (i) expand and improve access to water and sanitation services, taking into account the impacts of climate change; and (ii) improve the management of water and sanitation services through the implementation of nonrevenue water and energy efficiency programs, as well as operational and social management actions in the service areas slated for expansion.
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IMPACTS

Indicator	Unit of measurement	Baseline	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	Final target ¹	Means of verification	Comments
Impact 1. Biodegradable organic matter (BOD ₅) not discharged into bodies of water in the sanitation services expansion area ²	Kilograms per year	0	2019					250	250	Final evaluation report based on Portoaguas [municipal water and sanitation company] data.	Using the WWTPs' maximum volume and an effluent quality target of no more than 100 milligrams per milliliter BOD ₅
Impact 2. Property values in the program target area ³	%	0	2019					10	10	Records of the Property Registry Office of the GADMCP and ex post evaluation report	Increase in property values in the program target area relative to the comparator group, after controlling for differences in treatment and control relative to the baseline and trends over time. GADMCP-OC data from the most recent year available.

¹ Targets may be revised in the program launch workshop.

² The sanitation services expansion area includes the rural parishes of Alajuela, Chirijos, Abdón Calderón (including San Gabriel), Pueblo Nuevo, and the urban parish of Colón.

³ The area of intervention includes the rural parishes of San Plácido, Alajuela, Chirijos, Abdón Calderón (including San Gabriel), Pueblo Nuevo, Río Chico, Crucita, and the urban parish of Colón.

EXPECTED OUTCOMES

Indicator	Unit of measurement	Baseline	Baseline year	Year					Final target	Means of verification	Comments
				1	2	3	4	5			
Specific objective 1: Expand and improve access to water and sanitation services, taking into account of the impacts of climate change											
Outcome 1: Water service in Portoviejo Canton expanded and improved											
O.1.1. Households with improved access to the water system in the program target area ³	Household	0	2019					5,576	5,576	Semiannual progress report	Access is considered improved if service continuity is 24 hours per day. Households with service in 2019
O.1.2 New households with access to the water system in the program target area ³	Household	0	2019					14,194	14,194		The baseline represents households with service in 2019. Target includes 14,194 new households with service.
Outcome 2: Sewer service in Portoviejo Canton expanded, improved, and resilient to climate change											
O.2.1 New households with access to public sewer systems resilient to effects of climate change in the sanitation service expansion area ²	Household	0	2019					5,500	5,500	Idem	Refers to households with effective access based on a connection rate of 86%. Resilient means the infrastructure will be designed to operate reliably under future climate change scenarios.
O.2.2 Households with treated wastewater in the sanitation service expansion area ²	Household	0	2019					5,500	5,500		Wastewater is considered treated when wastewater treatment plant (WWTP) effluents comply with the Discharge Law – Table 19
Outcome 3: Roads protected from flooding caused by extreme precipitation events (made worse by climate change)											
O.3.1 Kilometers or roads protected from risk of flood caused by extreme precipitation events during the 10-year returns period in the parish seats of Alajuela, Chirijos, Pueblo Nuevo, San Gabriel-El Rodeo, Abdón Calderón and Río Chico	Kilometer	2.5	2019					4.5	4.5	Idem	The baseline and target will be defined once project designs are available. The designs will include climate change considerations.
Specific objective 2: Improve water and sanitation services management through nonrevenue water and energy efficiency programs, as well as operational management and social action in the service expansion areas											
Outcome 4: Improved quality of the water and sanitation services provided by Portoaguas in Portoviejo Canton											
O.4.1 Average continuity of water service in the program target area ³	Hours per day	16	2019					24	24	Operator annual reports	Continuity refers to total available hours of water per day.
O.4.2 Percentage of samples meeting water quality parameters in the program target area ³	%	0	2019					100	100		Annual number of samples complying with Ecuadorian standard / total samples collected during the year
Outcome 5: Improved energy efficiency of the drinking water system											
O.5.1 Energy consumption per volume of water pumped into the Cuatro Esquinas water treatment plant (WTP)	kWh per cubic meter	0.44	2019					0.38	0.38	Audited financial statements	Includes consumption for the entire WTP

Indicator	Unit of measurement	Baseline	Baseline year	Year					Final target	Means of verification	Comments
				1	2	3	4	5			
Outcome 6: Improved water and sanitation service management by Portoaguas											
O.6.1 Percentage of nonrevenue water in the water system of the city of Portoviejo	Percentage	72.1	2019					62	62	Audited financial statements	Measured as: annual volume of water distributed to the system minus annual volume invoiced divided by volume distributed during the year
O.6.2 Portoaguas financial self-sufficiency by year	Percentage	100	2018					100	100	Audited financial statements	Measured as: annual operating revenue divided by annual operating, maintenance, and overhead
O.6.3 Annual coverage in areas incorporated ⁴ into the Portoaguas service area	Percentage	0	2019					70	70	Audited financial statements	Measured as: annual billed amount paid divided by annual amount billed
Outcome 7: Inclusive policies incorporated into the practices of Portoaguas and the Decentralized Autonomous Municipal Government of Portoviejo Canton (GADMCP)											
O.7.1 Percentage of women who complete technical training courses in plumbing	Percentage	0	2019					60	60	Course attendance records	In all, 12 courses will be given with 200 participants. The target for the number of women participants is 120.
O.7.2 Number of rural parishes with Water Guardians programs led by women	Number of parishes	1	2019		1	2	3	7	7	GADMCP and Portoaguas reports	Parishes with women recognized as water guardian leaders in official events conducted in the parishes and at Portoaguas
O.7.3. Women engineers in Portoaguas technical divisions	Number of women	2	2019					5	5	Portoaguas records	Women engineers on staff at the Portoaguas technical divisions

OUTPUTS

Output	Unit of measure	Cost	Related outcomes	Baseline	Baseline year	Year					Final target	Means of verification
						1	2	3	4	5		
Component 1: Expanding and improving water, sanitation, and stormwater drainage systems in rural parishes of Portoviejo Canton												
Water treatment system built												
Catchment system built	System	694,596.60	1.1, 1.2, 4.1	0	2020				1		1	Provisional delivery certificate and GADMCP/Portoaguas compliance reports
WWTP built and compliant with access requirements for persons with disabilities	WWTP	14,473,030.95		0	2020				1		1	
Intake tank built	Tank	2,318,262.45		0	2020				1		1	
Electrical substation built	Substation	5,146,897.00		0	2020				1		1	
Water distribution and storage systems built												
Kilometers of water distribution lines built in rural parishes	Number of kilometers	29,392,489.00	1.1, 1.2, 4.1	0	2020			10	25	14	49	Idem
Storage tanks built in rural parishes	Tank	9,702,913.00		0	2020			2	5	2	9	
Water distribution systems												
Kilometers of distribution systems built in rural parishes	Number of kilometers	21,360,030.80	1.1, 1.2, 4.1	0	2020			38	229	114	381	Idem
New residential water connections built in rural parishes	Water connections	2,485,596.75		0	2020			3,054	8,330	6,795	18,179	
Kilometers of water distribution systems built in Colón	Kilometers	3,970,682.10		0	2020				14	19	33	
New residential water connections built in Colón	water connections	333,172.35	1.1, 1.2	0	2020				850	1,177	2,027	
Sanitation and WWTP systems built												
Kilometers of sanitary sewer systems built in rural parishes	Number of kilometers	10,306,254.00	2.1, 2.2	0	2020			19	48	28	95	Idem
New residential wastewater connections built in rural parishes	Number of wastewater connections	903,981.75		0	2020			1,042	2,606	1,564	5,212	
Climate change-resilient WWTPs that are compliant with access requirements for persons with disabilities built in rural parishes	WWTP	4,959,629.85		0	2020			1	3	1	5	
Kilometers of sanitary sewer systems built in Colón	Number of kilometers	2,450,604.45		0	2020				7	10	17	
New residential connections built in Colón	Number of wastewater connections	297,780.00		0	2020				474	711	1,185	
Colón WWTP built	WWTP	960,874.95		0	2020				1		1	
Stormwater drainage systems built												
Kilometers of stormwater drainage systems built in parishes	Number of kilometers	1,492,999.00	3.1	0	2020				3		3	Idem

Water treatment and/or wastewater treatment plant designs completed												
Drinking water and/or sanitation studies optimized, including climate change considerations	Number of studies	560,000.00	1.1, 1.2, 2.1, 2.2	0	2020	2	1				3	Final studies approved by the executing agency
Component 2: Improving management of water and sanitation services in Portoviejo Canton												
Nonrevenue water program implemented												
Kilometers of the existing water distribution system disconnected	Number of kilometers	784,000.00	4.1, 6.1	0	2020		15	12			27	GADMCP/Portoaguas reports on compliance with technical report
Hydraulic sectors implemented	Number of sectors	1,176,000.00		0	2020		10	10			20	
Energy efficiency program implemented												
Pumping systems replaced and operating	Pumping system	1,120,000.00	5.1	0	2020			2			2	WWTP management reports
Program to improve Portoaguas management of services implemented												
Water master plan updated to incorporate climate change considerations	Plan	784,000.00	1.1, 1.2	0	2020			1			1	Final studies approved by Portoaguas
Sanitary sewer master plan prepared with climate change considerations	Plan	1,120,000.00	2.1, 2.2	0	2020				1		1	Idem
Equipment for sewer system operations and maintenance operating	Equipment	560,000.00	2.2	0	2020		1				1	Portoaguas report
Rated adjustment study prepared	Study	22,400.00	6.2	0	2020		1				1	Final studies approved by Portoaguas
Business management model for rural parishes in the target area developed and implemented	Model	89,600.00	6.3	0	2020				1		1	Idem
Commercial technical system Implemented	System	224,000.00	6.2	0	2020			1			1	Training report on Portoaguas' use of the system
Water quality plan prepared and implemented	Plan	168,000.00	4.2	0	2020				1		1	Portoaguas operational report on control and quality measures initiated
Social and community sustainability program for Portoaguas and the GADMCP implemented												
Social management plan for rural parishes in the target area implemented	Plan	224,000.00	6.2, 6.3	0	2020				1		1	Portoaguas report including activities implemented in each parish by year
Training plan on prevention of workplace violence and harassment prepared and implemented	Plan	5,600.00	7.1, 7.3	0	2020					1	1	Report on training sessions. See optional link 9 for details.

Number of buildings equipped with appropriate restroom infrastructure to install lactation and diaper-changing areas	Number of buildings	5,600.00	7.1, 7.3	0	2020			1	1		2	GADMCP and Portoaguas reports featuring photos of their respective buildings. See optional link 9 for details.
Monitoring system for GADMCP community volunteers program developed and implemented	System	42,560.00	6.1	0	2020		1				1	Report of the system in operation with monitoring by the volunteer program. See optional link 9 for details.
Plumbing training program for men and women to provide technical support to Portoaguas prepared and implemented	Program	67,200.00	7.1	0	2020		1				1	Portoaguas report on activities completed and number of persons trained. See optional link 9 for details.
Portoaguas Water Guardians program for women replicated in seven rural parishes of the canton	Program	11,200.00	7.2	0	2020				1		1	Portoaguas report on each parish, with lessons learned and annual improvements. See optional link 9 for details.
Plan to recruit women engineers for Portoaguas technical divisions implemented	Plan	2,240.00	7.3	0	2020		1				1	Portoaguas monitoring report. See optional link 9 for details.
Marketing project for GADMCP producer associations implemented	Number of associations	89,600.00	6.1	0	2020		1	2	2		5	Portoaguas monitoring report. See optional link 9 for details.

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Country:	Ecuador
Project number:	EC-L1248
Name:	Water and Sewer Program for Portoviejo Canton
Executing agency:	Decentralized Autonomous Municipal Government of Portoviejo Canton (GADMCP)
Fiduciary team:	Marcela Hidrovo and Carolina Escudero (VPC/FMP)

I. INTRODUCTION

- 1.1 The program's fiduciary management takes into account: (i) the fiduciary context of the country; (ii) the fiduciary risk evaluation; (iii) the 2019 institutional capacity analyses (Institutional Capacity Assessment System (ICAS) methodology) performed on the GADMCP and the Portoviejo Municipal Water and Sanitation Company (Portoaguas); and (iv) inputs from working meetings.
- 1.2 The program will be co-financed by the Spanish government's Development Promotion Fund (FONPRODE) and the European Investment Bank.

II. FIDUCIARY CONTEXT OF THE COUNTRY

- 2.1 As provided by the Ecuadorian constitution, the Planning and Public Finances Code (COPFP), and the Regional Organization, Autonomy, and Decentralization Code (COOTAD), the GADMCP is responsible for, *inter alia*, administering the canton, which is autonomous from the central government. Its responsibilities include providing water, sanitation, and stormwater drainage services to urban areas and several rural parish seats though Portoaguas, an agency of the GADMCP.
- 2.2 The country's fiduciary context has shown significant progress since 2008, as demonstrated by recent assessments of the public procurement system (update of [MAPS-2018](#)) and the public financial management system.
- 2.3 **Procurement system.** Document GN-2680-2 approved the "First Agreement for the Use of Ecuador's National Public Procurement System (SNCP) for IDB-financed Projects," signed by the Ministry of Economy and Finance, the National Public Procurement Service (SERCOP), and the IDB. A new agreement on use of the SNCP is currently in preparation.
- 2.4 **Financial management system.** GADMCP uses the ERP-SAFT, a system developed for that institution, which has been implemented since 2016. It integrates the budget, accounting, cash management, and taxation processes. It is used by the public enterprises reporting to the GADMCP and is interoperable with the following systems: WorkFlow BPM (procurement processing); and SI-GESTION (program/project creation and monitoring). GADMCP will develop a project reporting module in SAFT. GADMCP is subject to oversight and inspection

by the Office of the Comptroller General (CGE). The country's financial management systems are at an adequate level of development and should be supplemented by an external audit of the program by eligible audit firms acceptable to the IDB.

III. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY

- 3.1 The borrower and executing agency will be the GADMCP, which will create a program management unit (PMU). The PMU will report to GADMCP senior management and may interact with the other divisions of the institution that are involved with the program. The PMU will have a procurement specialist and financial specialist dedicated exclusively to the program. It will receive technical support from Portoaguas to prepare terms of reference, monitor contracts, and to ensure the timely approval of outputs. The PMU may be financed with program resources. The program Operating Regulations will include the profiles of PMU staff and the mechanisms of coordination between these institutions.

IV. FIDUCIARY RISK EVALUATION AND MITIGATION ACTIONS

- 4.1 No risks are anticipated.

V. CONSIDERATIONS FOR THE SPECIAL PROVISIONS OF CONTRACTS

- 5.1 None.

VI. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

- 6.1 **Procurement execution.** The procurement plan will be updated annually; information on the procurement operations is provided in the procurement plan link. For procurement operations that involve joint financing resources with FONPRODE, the agreements and requirements will apply, as set forth in the cofinancing framework agreement between the IDB and the Kingdom of Spain, signed on 1 April 2017.¹
- a. **Procurement of works, goods, and nonconsulting services.**² Contracts subject to international competitive bidding (ICB)³ will be executed using the standard bid documents issued by the IDB, in accordance with the thresholds presented in Table VI-1.

¹ The agreement will be signed once the Spanish government approves the FONPRODE financing.

² Policies for the Procurement of Goods and Works Financed by the Inter-American Development Bank (document [GN-2349-9](#)) or subsequent updates thereof, paragraph 1.1: Nonconsulting services are treated as goods.

³ Thresholds for ICB are US\$3,000,000 for works and US\$250,000 for goods.

- b. **Procurement, selection, and contracting of consultants.** Contracts will be executed using the standard request for proposals issued by or agreed upon with the Bank. The threshold determining the composition of the shortlist of international consultants⁴ is indicated in Table VI-1.
- c. **Selection of individual consultants.** Individual consultants will be contracted in accordance with Section V of the Policies.
- d. **Use of the country procurement system.** The use of the SNCP⁵ will be governed by the agreement referenced in paragraph 2.3.
- e. **Advance procurement/Retroactive financing.** The Bank may retroactively finance, against the loan proceeds, up to US\$5.5 million (20% of the proposed loan amount) and recognize, against the local counterpart, up to US\$3,534,621.40 (20% of the estimated local counterpart contribution) in eligible expenses incurred by the borrower prior to the loan approval date. Under Component 1, these include retroactive financing/recognition of expenditures for the purchase and/or expropriation of land for program works and services; and, under program administration, for goods and services procured to establish the PMU, provided that requirements substantially similar to those established in the loan contract have been met. Such expenditures will have been incurred on or after 15 July 2019 (the project profile approval date), but under no circumstance include expenses incurred more than 18 months prior to the loan approval date.
- f. **Domestic preference.** Goods of Ecuadorian origin will have a price preference⁶ equivalent to 15% in contracts subject to ICB.

Table VI-1. Thresholds (US\$)

Works	Goods	Consulting firms
ICB	ICB	International advertising and shortlist with up to two firms the same nationality
≥ 3,000,000	≥ 250,000	≥ 200,000

- 6.2 **Procurement supervision.** The procurement plan will establish the method of IDB supervision. Contracts subject to ex post review will be executed in accordance with Appendix 1 of the Policies, by means of agreed visits.
- 6.3 **Other special procedures.** None anticipated.
- 6.4 **Records and files.** The executing agency will maintain complete updated records and files duly organized in a way that distinguishes processes financed with the local counterpart contribution from those financed with other program resources.

⁴ For consulting firms, the threshold is US\$200,000; for lower amounts, the shortlist may be made up entirely of national consulting firms.

⁵ If the Bank validates another system or subsystem, it will apply to the operation in accordance with the terms of the loan contract and the agreement on use of the SNPC.

⁶ Document [GN-2349-9](#) or subsequent updates thereof, Appendix II and the loan contract.

Table VI-2. Thresholds for ex post review (US\$)

Works	Goods	Consulting services	Individual consultants
< 3,000,000	< 250,000	< 200,000	< 50,000

Note: Thresholds for ex post review are applied according to the executing agency's fiduciary capacity.

VII. FINANCIAL MANAGEMENT AGREEMENTS AND REQUIREMENTS

- 7.1 **Programming and budget.** The COPFP, the COOTAD, the budget classification codes, and legal and regulatory provisions issued by the Ministry of Economy and Finance with respect to the closing and opening of the budget, establish the rules that govern the GADMCP budget cycle, which is approved by the Cantonal Council and includes the amount to be executed for each source of financing (domestic and external). The system used for this purpose is the SAFT.⁷
- 7.2 **Accounting and information systems.** The GADMCP will apply the International Public Sector Accounting Standards (IPSAS), once they are implemented by the government, as well as the Internal Revenue Act. The program accounting system will be maintained in the SAFT system, which will be used to record all obligations and payments. The feasibility of producing financial reports by source of financing will be analyzed following verification of the system's reliability in the reporting module. The GADMCP financial statements are not public information, but will be submitted quarterly to the Ministry of Economy and Finance and the Technical Planning Secretariat (SENPLADES).
- 7.3 **Disbursements and cash flow.** The GADMCP will use a system of special or specific-purpose bank accounts held at the Central Bank of Ecuador to receive the proceeds of multilateral loans. For the receipt of loan resources, the GADMCP will open three special accounts for the program at the Central Bank of Ecuador, one for the IDB financing, a second for European Investment Bank resources, and a third for FONPRODE, to reduce the transactional burden for the executing agency. Payments will be executed through the SAFT system.
- 7.4 The Bank will disburse the loan proceeds using the advance of funds modality, in accordance with the program's real liquidity needs based on the detailed financial plan and commitments acquired or soon to be acquired, for up to period of up to six months. At the request of the borrower or the executing agency, the Bank may also make direct payments to suppliers or reimburse them for expenditures.
- 7.5 Accounting for the use of advances of funds will adhere to the provisions of the Financial Management Guidelines for IDB-financed Projects (document OP-273-12 or the current version thereof). A new disbursement will be released after justification of at least 80% of the balance of previous advance.
- 7.6 Ex post review of the supporting documentation for payments will be conducted by the Bank and/or external auditors after the disbursement of funds.

⁷ The Transparency and Access to Public Act requires that information on the GADMCP's annual appropriations, approved budget, and execution be made public and reported monthly.

- 7.7 **Internal control and external auditing.** The Ecuadorian constitution provides that the CGE is responsible for managing the public sector control system. In accordance with the Law on the National Control System and the CGE, the executing agency is subject to CGE oversight and auditing. The executing agency has an internal audit unit that reports directly to the CGE; the Bank does not use its services because its audit plans do not include regular periodic reviews of the program.
- 7.8 **External control and reports.** The CGE has authority to audit public sector entities. However, projects are not necessarily included in the annual audit plan. Audits will be conducted by an independent external auditing firm acceptable to the Bank in accordance with Policy OP-273-12 or the current version thereof. The executing agency will hire the firm based on terms of reference previously agreed upon with the Bank, the cost of which can be covered with loan proceeds. During execution, the executing agency will submit its audited annual financial statements (including all cofinancing sources and the local counterpart) within 120 days of the close of each fiscal year or the date of the last disbursement. The executing agency will engage the audit firm up to 120 days before the end of the audit year in question. The Bank may request audited or unaudited financial statements or reports relating to the program, as necessary.
- 7.9 There is no national policy on public disclosure of audit reports; however, in accordance with the access to information and disclosure policy currently in force, the program's audited financial statements will be publicly disclosed via the Bank's systems.

VIII. SUPERVISION PLAN AND EXECUTION MECHANISM

- 8.1 **Execution mechanism.** The GADMCP will execute the program through a PMU that will be responsible for planning, programming, management, procurement, contracting, reporting, requesting disbursements, coordinating the inspection of works and other planned execution actions, monitoring and evaluating program execution, and other responsibilities specified in the program Operating Regulations. See paragraph 3.1 of this annex.
- 8.2 In view of the three different financing sources (IDB Ordinary Capital, European Investment Bank, and FONPRODE), financial reports will be broken down by each source to facilitate planning, monitoring, and reporting both by independently and jointly.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/19

Ecuador. Loan ____/OC-EC to Gobierno Autónomo Descentralizado Municipal del Cantón Portoviejo. Water and Sewer Program for Portoviejo Canton

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with Gobierno Autónomo Descentralizado Municipal del Cantón Portoviejo, as borrower, and with the Republic of Ecuador, as guarantor, for the purpose of granting the former a financing to cooperate in the execution of the Water and Sewer Program for Portoviejo Canton. Such financing will be for the amount of up to US\$27,500,000 from the resources of the Bank's Ordinary Capital, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on ____ 2019)